PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY	PCT				
Hoffmann . Eitle Arabellastrasse 4 D-81925 München EINGEGANGEN GERMANY	NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION (PCT Rule 44/1)				
2 8. Fob. 2003 Hoffman'n e eithe münchen Patentanmähh rechtsanmähte	Date of mailing (day/month/year) 27/02/2003				
Applicant's or agent's file reference					
91 117 a/ubr	FOR FURTHER ACTION See paragraphs 1 and 4 below				
International application No. PCT/EP 01/14820	International filing date (day/month/year) 14/12/2001				
Applicant .					
VIAXXEL BIOTECH GMBH					
	Is of the International Application (see Rule 46): Illy 2 months from the date of transmittal of the tails, see the notes on the accompanying sheet. Impanying sheet. In Report will be established and that the declaration under small fee(s) under Rule 40.2, the applicant is notified that: In transmitted to the International Bureau together with the test and the decision thereon to the designated Offices.				
4. Further action(s): The applicant is reminded of the following:					
Shortly after 18 months from the priority date, the international are if the applicant wishes to avoid or postpone publication, a notice priority claim, must reach the International Bureau as provided completion of the technical preparations for international publications.	e of withdrawal of the international application, or of the in Rules 90 <i>bis</i> .1 and 90 <i>bis</i> .3, respectively, before the				
Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).					
Within 20 months from the priority date, the applicant must perform before all designated Offices which have not been elected in the priority date or could not be elected because they are not bound	e demand or in a later election within 19 months from the				
Name and mailing address of the International Searching Authority	Authorized officer				
European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Chantal Meyer				

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international polication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been its filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (c ntinued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples Illustrate the manner in which amendments must be explained in the accompanying letter:

- [Where originally there were 48 claims and after amendment of some claims there are 51]:

 *Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers;
 claims 30, 33 and 36 unchanged; new claims 49 to 51 added.
- [Where originally there were 15 claims and after amendment of all claims there are 11]: "Claims 1 to 15 replaced by amended claims 1 to 11."
- [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
 "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
 "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
- 4. [Where various kinds of amendments are made]: "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claims 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international appplication is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for International preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference		on of Transmittal of International Search Report A/220) as well as, where applicable, item 5 below.
91 117 a/ubr International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)
, ,	14/10/0001	
PCT/EP 01/14820	14/12/2001	20/12/2000
Applicant		•
VIAXXEL BIOTECH GMBH		
This International Search Report has bee according to Article 18. A copy is being tr		Authority and is transmitted to the applicant
	s of a total of 10 sheets. y a copy of each prior art document cited in t	this report.
Basis of the report		
	international search was carried out on the iless otherwise indicated under this item.	basis of the international application in the
the international search v Authority (Rule 23.1(b)).	was carried out on the basis of a translation of	of the international application furnished to this
was carried out on the basis of th		e international application, the international search
7	ernational application in computer readable	form.
	o this Authority in written form.	········
	o this Authority in computer readble form.	
the statement that the su	as filed has been furnished.	g does not go beyond the disclosure in the
	'	m is identical to the written sequence listing has been
2. X Certain claims were for	und unsearchable (See Box I).	
3. Unity of invention is lac	,	
4. With regard to the title,		
X the text is approved as s	ubmitted by the applicant.	
the text has been establi	shed by this Authority to read as follows:	•
		·
		· .
·		
5. With regard to the abstract,	·	
the text has been establi	ubmitted by the applicant. shed, according to Rule 38.2(b), by this Auth te date of mailing of this international search	nority as it appears in Box III. The applicant may, report, submit comments to this Authority.
The figure of the drawings to be put		
as suggested by the app		None of the figures.
because the applicant fa	•	
because this figure bette	er characterizes the invention.	

International Application No PCT/EP 01/14820

A. CLASSIFICATION OF SUBJECT MATTER
1PC 7 C07K14/47 A61K38/17 A61P37/06 A61P37/02 A61P37/08 A61P17/06 A61P21/04 A61P19/02 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 C07K A61K Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, CHEM ABS Data, EMBASE, MEDLINE C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X WO 97 29781 A (IMMUNEX CORPORATION) 1-5, 21 August 1997 (1997-08-21) 8-11 16-18,31 page 6, line 15 -page 10, line 20 page 12, line 5 - line 37 claims 1-14 χ WO 93 21318 A (DANA-FARBER INSTITUTE INC.) 1-1128 October 1993 (1993-10-28) 16-20.31claims 1-69 X WO 95 21916 A (BASF AKTIENGESELLSCHAFT) 1-4.1117 August 1995 (1995-08-17) 14-26,31claims 1-21 Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention 'E' earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-ments, such combination being obvious to a person skilled citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means in the art. document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 27/02/2003 10 February 2003 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,

Fax: (+31-70) 340-3016

Siatou, E

International Application No PCT/EP 01/14820

Category.°	ation) DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Juliagory.		nelevant to claim No.
X	WO 93 23531 A (UNIV DUKE) 25 November 1993 (1993-11-25)	1-4, 11-13,
	claims 1-35	16-19,31
X	WO 99 12965 A (TSCHOPP JURG ;BIOGEN INC (US)) 18 March 1999 (1999-03-18) claims 1-40	1-3, 11-19,31
X	ZHOU ET AL: "A novel cell-surface molecule expressed by human interdigitating reticulu cells, Langerhans cells, and activated lymphocytes is a new member of the Ig superfamily" JOURNAL OF IMMUNOLOGY, THE WILLIAMS AND WILKINS CO. BALTIMORE, US, vol. 149, no. 2,	1-3,5-8
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X	ZHOU L-J ET AL: "HUMAN BLOOD DENDRITIC CELLS SELECTIVELY EXPRESS CD83, A MEMBER OF THE IMMUNOGLOBULIN SUPERFAMILY" JOURNAL OF IMMUNOLOGY, THE WILLIAMS AND WILKINS CO. BALTIMORE, US, vol. 154, 1995, pages 3821-3835, XP002033762 ISSN: 0022-1767 cited in the application the whole document	1-3,5-8
X	CHEN T-H ET AL: "STRUCTURE OF PP32, AND ACIDIC NUCLEAR PROTEIN WHICH INHIBITS ONCOGENE-INDUCED FORMATION OF TRANSFORMED FOCI" MOLECULAR BIOLOGY OF THE CELL, BETHESDA, MD, US, vol. 7, no. 12, 1996, pages 2045-2056, XP000916325 ISSN: 1059-1524 the whole document	1,11, 14-16,31
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International Application No PCT/EP 01/14820

Category °	ation) DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Caregory	Onation of decentarity man indication, where appropriate, or the relevant passages	ricievani to cidim No.
Χ	KING P H: "Hel-N2: a novel isoform of Hel-N1 which is conserved in rat neural tissue and produced in early	1,11-13
	embryogenesis" GENE, ELSEVIER BIOMEDICAL PRESS. AMSTERDAM, NL, vol. 151, no. 1, 30 December 1994 (1994–12–30), pages 261–265, XP004042649	
: : :	ISSN: 0378-1119 cited in the application the whole document	
X	ROSS R A ET AL: "HuD, a neuronal-specific RNA-binding protein, is a potential regulator of MYCN expression in human neuroblastoma cells" EUROPEAN JOURNAL OF CANCER, PERGAMON PRESS, OXFORD, GB, vol. 33, no. 12, October 1997 (1997-10), pages 2071-2074, XP004284648 ISSN: 0959-8049 the whole document	1,11-13
X	C. M. BRENNAN ET AL: "Protein Ligands to HuR Modulate Its Interaction with Target mRNAs In Vivo" THE JOURNAL OF CELL BIOLOGY, vol. 151, no. 1, 2 October 2000 (2000-10-02), pages 1-13, XP002230286 abstract	1,11,14, 15
X	REBEL J M J ET AL: "Human pp32 pseudogene" EMBL NUCLEOTIDE SEQU, 3 April 1997 (1997-04-03), XP002106402 the whole document	1,11,14,
X	WEI-JUN MA ET AL: "Cloning and Characterization of Hur, a Ubiquitously Expressed Elav-like Protein" THE JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 271, no. 14, 5 April 1996 (1996-04-05), pages 8144-8151, XP002230287 cited in the application abstract	1,11-13
	-/	

3

International Application No PCT/EP 01/14820

	ntion) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CHUNG S ET AL: "THE ELAV-LIKE PROTEINS BIND TO A CONSERVED REGULATORY ELEMENT IN THE 3'-UNTRANSLATED REGION OF GAP-43 MRNA" JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US, vol. 272, no. 10, 7 March 1997 (1997-03-07), pages 6593-6598, XP002920798 ISSN: 0021-9258 the whole document	1-31
A	KRUSE MONIKA ET AL: "Inhibition of CD83 cell surface expression during dendritic cell maturation by interference with nuclear export of CD83 mRNA" JOURNAL OF EXPERIMENTAL MEDICINE, TOKYO, JP,	1-31
	vol. 191, no. 9, 1 May 2000 (2000-05-01), pages 1581-1589, XP008002389 ISSN: 0022-1007 cited in the application abstract	
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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1-5, 8-12, 14-20, 21-26 (partially), 27-31

Present claims 1-5 and 8-12 and 14-20 relate to compounds defined by reference to a desirable characteristic or property, namely blockage of the binding betwen a member of the HuR family and a mRNA encoding a member of the CD83 protein family and consequent reduction of expression of a member of CD83 family of proteins in the cell. The claims cover all compounds and consequently compositions and uses therof having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the compound by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the compounds disclosed in claims 6-7, 13 and 15 of the present application.

Present claims 21-26 relate to an extremely large number of possible expression vectors/host cells comprising a nucleic acid sequence encoding a ribonucleic acid or protein and uses thereof. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the teh expression vectors/host cells claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the expression vectors/host cells comprising the nucleic acids of claims 6-7 or nucleic acids encoding the proteins of claims 13, 15.

Present claims 27-31 encompass a genus of compounds defined only by their function, wherein the relationship between the structural features of the members of the genus and said function has not been defined. In the absence of such a relationship either disclosed in the as-filed application or which could have been recognised based upon informatio readily available to the skiled man in the art, the skiled artisan would not know how to make and use compounds that lack structural definition. The fact that one could have assayed a compound of interest using the claimed assays does not overcome this defect since one would have no knowledge beforehand as to whether or not any given compound (other than the ones that might be particularly disclosed in the application) would fall within the scope of what is calimed. It would require undue experimentation to randomly screen undefined compounds for the claimed activity. Therefore, no search has been performed for calims 27-31 under

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Art. 5 and 6 PCT.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

International application No. PCT/EP 01/14820

INTERNATIONAL SEARCH REPORT

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons: 1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely: 2. X Claims Nos.: 1-5, 8-12, 14-20, 21-26 (partially), 27-31 because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically: see FURTHER INFORMATION sheet PCT/ISA/210
because they relate to subject matter not required to be searched by this Authority, namely: 2. X Claims Nos.: 1-5, 8-12, 14-20, 21-26 (partially), 27-31 because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This International Secretion Authority found multiple investions in this international conficultion, as follows:
This International Searching Authority found multiple inventions in this international application, as follows:
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark on Protest The additional search fees were accompanied by the applicant's protest.
No protest accompanied the payment of additional search fees.

Information on patent family members

International Application No
PCT/EP 01/14820

	Intent do		D. I.V.				11/14820
cite	atent document d in search repo	ort	Publication date		Patent family member(s)	<u> </u>	Publication date
WO	9729781	: A	21-08-1997	AU WO	2273397 9729781		02-09-1997 21-08-1997
WO	9321318	Α	28-10-1993	US AT	5316920 185600	A T	31-05-1994 15-10-1999
				ΑÜ	4104893		18-11-1993
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			*	CA DE	2118309		28-10-1993
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			,	EΡ	0636176	A1	01-02-1995
			•	JP	9508781		09-09-1997
				NO US	943915 6068984	A A	09-12-1994 30-05-2000
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				US	5710262	Α .	20-01-1998
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					5773246	A 	30-06-1998
WO	9912965	. A	18-03-1999	AU AU	9315298 9316298		29-03-1999 29-03-1999
				BR	9812433		26-09-2000
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			•	CA CA	2303424 2303615		18-03-1999 18-03-1999
				CN	1269832		11-10-2000
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				NO	20001240	A	10-05-2000
			•	NO	20001242		11-05-2000
			•	NZ PL	503850 <i>i</i> 339463 <i>i</i>		20-12-2002 18-12-2000
				PL	339740		02-01-2001
				SK	3532000	A 3	03-12-2001
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				SK	3542000		14-08-2000
				TR	200000654	T2	21-07-2000
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